This listing of claims will replace all prior versions, and listings, of claims in the present application.

LISTING OF CLAIMS:

Claim 1. (Original) A method comprising:

processing a data packet, having a destination address (d), towards a routing destination; and

determining a default-route-prefix (P_d) in a default-route determination step, when in a routing table cache (L_1) and in a routing table (L_2), there is no entry with a destination address prefix that is a prefix of the destination address (d).

Claim 2. (Currently Amended) [[A]] The method as recited in claim 1, wherein the default-route-prefix (P_d) is determined to be said [[a]] prefix of at least the destination address (d).

Claim 3. (Currently Amended) [[A]] The method as recited in claim 1, wherein in a first lookup step for the destination address (d) the destination address prefix being said [[a]] prefix thereof is searched in the routing table cache (L_1), and wherein if said first lookup step results in not finding such destination address prefix, in a second lookup step for said destination address (d) the destination address prefix being a prefix thereof is searched in the routing table (L_2).

Claim 4. (Currently Amended) [[A]] The method as recited in claim 3, wherein if the second lookup step on the routing table (L_2) results in finding the destination address prefix being said

[[a]] prefix of the destination address (d) a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache (L_1) in a cache update step, and the data packet is forwarded in a destination forwarding step to a [[the]] corresponding routing destination.

Claim 5. (Currently Amended) [[A]] The method as recited in claim 3, wherein if the second lookup step results in not finding the destination address prefix being said [[a]] prefix of the destination address (d), in a default forwarding step the data packet is forwarded to a default routing destination.

Claim 6. (Currently Amended) [[A]] The method as recited in claim 1, wherein in a default-route caching step, the default-route-prefix (P_d) is entered together with a [[the]] default routing destination as an entry into the routing table cache (L_1).

Claim 7. (Currently Amended) [[A]] The method as recited in claim 3, wherein in the first lookup step the routing table cache (L_1) is searched for covering path entries that reside in the routing table cache (L_1), the covering path entries in their totality being a prefix for at least all destination address prefixes existing in the routing table (L_2).

Claim 8. (Currently Amended) [[A]] The method as recited in claim 7, wherein in an [[the]] event that the first lookup step results in finding no covering path entry for the destination address (d), the data packet is forwarded to a default routing destination in a default forwarding step.

Claim 9. (Currently Amended) [[A]] The method as recited in claim 7, wherein in an [[the]] event that the first lookup step results in finding one of said [[a]] covering path entry for the destination address (d), in the [[a]] second lookup step for said destination address (d) the destination address prefix being said [[a]] prefix of the destination address (d) is searched in the routing table (L_2).

Claim 10. (Currently Amended) [[A]] The method as recited in claim 3, wherein in an [[the]] event that the first lookup step results in finding the destination address prefix being said [[a]] prefix of the destination address (d), the data packet is forwarded in a destination forwarding step to a [[the]] corresponding routing destination.

Claim 11. (Original) A method comprising:

processing a data packet, having a destination address (d), towards a routing destination, wherein a default-route-prefix (P_d) resides together with a default routing destination as an entry in a routing table cache (L_1); and

forwarding the data packet to said default routing destination, when the default-route-prefix (P_d) matches at least part of said destination address (d).

Claim 12. (Currently Amended) An article of manufacture comprising a A computer program storage device, readable by machine, tangibly embodying a program of instructions executable by a machine to perform method steps usable medium having computer readable program code means embodied therein for causing processing of a data packet, the computer readable program

~~code means in said article of manufacture comprising computer-readable program code means~~ ~~for causing a computer to effect the steps of claim 1~~ <u>said method steps comprising the steps of</u> <u>claim1</u>.

Claim 13 –14. (Canceled)

Claim 15. (Original) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for processing of a data packet, said method steps comprising the steps of claim 11.

Claim 16. (Currently Amended) An apparatus comprising:

means for processing a data packet, having a destination address (d), towards a routing destination; and

means for determining a default-route-prefix (P_d) in a default-route determination step, when in a routing table cache (L_1) and in a routing table (L_2), there is no entry with a destination address prefix that is <u>said</u> [[a]] prefix of the destination address (d).

Claim17. (Canceled)